relation to my *L. crassistria* and *sulcata*, with which M. de Koninck unites it); but as I there described the width as rather greater, and do not give the absolute dimensions of the fine striæ, I hesitate to unite them without a comparison of specimens.

Very abundant in a piece of the black upper carboniferous limestone of Derbyshire.

(*Col.* University of Cambridge.)

Lingula latior (M'Coy).

Desc. Broad ovate anteriorly, gradually acuminated posteriorly; moderately convex towards the beak, very gradually flattened towards the margins; sides meeting at the beak at an angle of about 75°; front wide, semielliptically rounded; greatest width at about the middle of the length, from whence the posterior end is rapidly narrowed to the beak; surface with fine, sharply defined, strong, close, elevated, obtuse, concentric striæ slightly irregular from occasional branchings and interruptions, crossed in parts by longitudinal microscopic striæ. Length $4\frac{1}{2}$ lines, proportional width $\frac{80}{100}$.

Distinguished from the other described Carboniferous *Lingulæ* by the very wide ovate form of its anterior end, and the great comparative length and straightness of the posterior lateral edges, which, by their convergence at so small an angle, give the remarkable posterior attenuation or pointed beak, characteristic of the species.

Not very uncommon in the black limestone over the main limestone of Derbyshire.

(*Col.* University of Cambridge.)

XLII.—*On a species of* Strombus *in the Hunterian Museum at Glasgow.* By Thomas Gray, Esq., Glasgow*.

In the collection of shells bequeathed to the University of Glasgow by the late celebrated Dr. William Hunter, and preserved in the museum which bears his name, there is one interesting species which deserves to be recorded. The specimen in question is a *Strombus*, belonging to that section of the genus of which *S. vittatus* and *S. epidromis* form part, and what is very remarkable, a sufficiently characteristic figure of it is given in the admirable 'Historia Conchyliorum' of our countryman Dr. Martin Lister, published in London in 1685. The shell is engraved on

* Communicated by the Author, having been read before the Natural History Society of Glasgow.

pl. 855. f. 12 *a*, to which is added the following brief description:—"Buccinum bilingue Canadense, labro lævi, ex inferiore parte mucronato, clavicula dense admodum striata, longa, tenui."

Mr. Dillwyn, in his Index to the 'Historia Conchyliorum' of Lister, remarks that this figure "has been generally quoted for *Strombus vittatus; but I never saw that species with the lip so much expanded.*" *S. vittatus*, Linn., a figure of which is given by Lister on the same plate (f. 12 *b*), is perhaps the species to which this shell bears the nearest resemblance, particularly as regards the spire; the expansion of the lip however reminds one of *S. epidromis*, Linn., but its form, as may be seen on consulting Lister's figure, is very different from either. Linnæus, in the last edition of his 'Systema Naturæ,' does not quote Lister for his *S. vittatus*, no doubt for the reason given in the note at p. 1210; but Martini has appropriated both figures on Lister's plate to *S. vittatus*, in which he has been followed by Gmelin. Both of these authors had evidently, like Dillwyn, never seen the shell, but it is somewhat surprising that they should have confounded two species so very unlike each other.

As we are not aware of any recent conchological work in which this shell is taken notice of, and having every reason to believe that this is the only specimen known to exist in any collection, at least in this country, we have been induced to publish it anew, and to point it out to collectors and others who take an interest in conchological pursuits.

By the kind permission of Dr. Wm. Couper, the Professor of Natural History, we have been allowed to examine the shell and take a drawing of it. In describing it anew, we propose to give it the name of the author, and the only one we believe who has figured it, whose work is a lasting memorial of unwearied diligence and perseverance.

Strombus Listeri, T. Gray.

S. testa fusiformi, turrita, alba, luteo-fasciata et maculata, ultimo anfractu subcompresso, obtuse angulato, inferne sulcato; spira longitudinaliter plicata, transversim striata; labro plano, valde expanso, subquadrato, superne producto, intus lævi. Long. $4\frac{2}{3}$ unc., lat. $1\frac{4}{5}$ unc.

The colour and disposition of the markings very much resemble those of *S. vittatus, succinctus*, and others belonging to the same group, and for this reason, as well as from its general form, we are inclined to suppose the species to be oriental.

We would only remark further, that the shells which belonged to Dr. Hunter were purchased by him from the trustees of Dr. Fothergill, and it is not at all improbable that this specimen

was the very individual from which the figure in Lister was taken, as it agrees perfectly in size as well as general contour, and is evidently, from the comparative faintness of its coloration as well as its general appearance, a very old shell.

XLIII. — *Experiments on the Transformation of the Cystoid Worms into Tænias.* By C. T. Von Siebold*.

I was the first to advance, in the second volume of my 'Manual of Physiology,' published in 1844, the statement that the cystoid worm which lives as a parasite in the livers of rats and mice (the *Cysticercus fasciolaris*) was nothing but a stray *Tænia* which had become vesicular, and which was in fact the tape-worm of the cat (*Tænia crassicollis*). I also affirmed that the *Cysticercus fasciolaris*, like all other Acephalocysts, never possessed sexual organs, and therefore could only propagate by sexual generation when it found a suitable body, where it would lose its vesicular form and acquire the power of sexual development.

In the experiments made at the Institute of the University of Breslau, these transformations took place, as soon as the liver of a mouse or rat, previously ascertained to contain a *Cysticercus fasciolaris*, had been devoured by a cat. In the stomach of the cat, the livers of these Rodents were digested, whilst the worms contained in them remained unhurt; this parasite lost the caudal vesicle filled with fluid, and was then to be seen, without a tail, in the chyme of the stomach and small intestines of the cat, where, finding itself in a suitable place, it became developed in the articulated form of a tape-worm (*Tænia crassicollis*) with adult sexual organs. The perfect agreement of the head of the *Cysticercus fasciolaris* with the cephalic extremity of the *Tænia crassicollis*, as well as the fact that the different phases of development of the latter are often to be met with side by side in the intestines of cats, conducted to the preceding conclusion, which has received the approbation of many naturalists, but the correctness of which is still doubted by others.

Last year, Dr. Kuchenmeister, of Zittau, made some experiments with the *Cysticercus pisiformis*, which is frequently met with in the cysts of the coats of the intestines of the hare and rabbit. He caused some dogs and cats to devour these cysts, in the hope that after some time they would be developed in the intestines of these animals in the form of tape-worms. This experiment succeeded completely with the dogs, thus confirming that which

* From the Ann. Sci. Nat. 3 ser. xvii. p. 377.